2001 Corrector Power Supply Summary Report

Date	Power Supply	Faults	Solution
03-Aug-01	bi4-tv6	tripped, able to reset	reset
06-Aug-01	yo5-tv21	tripped to the off state, able to reset	reset
08-Aug-01	yo5-th20	tripped, pet page displayed "PsCtrlNotRight"	software
08-Aug-01	yo5-tv21	tripped, pet page displayed "PsCtrlNotRight"	software
13-Aug-01	yi7-th19	will not stay on	tunnel access needed
13-Aug-01	yo5-th20	will not stay on	tunnel access needed
22-Aug-01	bi8-tv20	difficulty ramping the WFG's ADT reports a 'mulsh error" for bi8-tv20	reset cfe-9b-ps1
22-Aug-01	bi9-th21	difficulty ramping the WFG's ADT reports a 'mulsh error" for bi8-tv20	reset cfe-9b-ps1
03-Sep-01	yi10-th7	tripped	reset
03-Sep-01	yi10-tv6	tripped	reset
04-Sep-01	bo7-tv7	tripped off	needs to be replaced
04-Sep-01	yi10-tv6-ps	cfe-11a-ps2 needed to be reset	reset cfe-11a-ps2
06-Sep-01	bi8-sx3	error signal, benched checked oaky	# replaced entire power supply
15-Sep-01	yo9-tv3	tripped, needs to be replaced	replaced entire power supply
18-Sep-01	yo9-tv3	Tripping to standby error, benched checked okay	# replaced entire power supply
19-Sep-01	yo9-tv3	trouble bringing the supply to the on state, but eventually did	needs to be replaced
19-Sep-01	yi7-tq4	Tripped off	reset
20-Sep-01	yi7-tq4	tripped, indicating a quench error, wrong program file for ramp factor was used	operations error
20-Sep-01	Correctors	many would not come back on due to power dip, needed to be recycled to reset okay	power failure
20-Sep-01	bi4-tv6	tripped, indicating over voltage before tripping	reset
24-Sep-01	bo10-th12	tripped off, able to reset remotely	reset, unknown
24-Sep-01	bo7-qs3	tripped off, able to reset remotely	reset, unknown
24-Sep-01	bo7-th12	tripped off, able to reset remotely	reset, unknown
24-Sep-01	bo7-th6	tripped off, able to reset remotely	reset, unknown
26-Sep-01	yo9-th13	fault is "unrecognized opcode or modifier"	control
26-Sep-01	yo5-th20	fault is PSCtrlNotOn	need tunnel access
29-Sep-01	yo8-th12	tripped off, tried to reset the PLC in 9A but did,t work	tunnel access needed
01-Oct-01	yo9-tv3	tripping to a standyby error state	loose connection at the magnet tree
04-Oct-01	10/11 O'clock corr.	all correctors tripped off due to a cryo lead flow interlock, cfe-9a-ps1 reset, PLC reset	cryo lead flow PLC reset, cfe-9a-ps1 reset
04-Oct-01	yo9-tv3	tripping to a standyby error state	loose connection at the magnet tree
04-Oct-01	yo9-tv3	tripped off, tried to bring on but trips off at -2amps, MCR will tune around it	tunnel access needed
05-Oct-01	bi4-tq6	tripped off when blue beam losses started	reset
06-Oct-01	bo7-tv7	tripped off and will not come back on	needs further investigation
06-Oct-01	bi4-tv6	tripped off	reset
07-Oct-01	yi2-qs3	would tripp, able to turn on after awhile	needs further investigation
08-Oct-01	yo9-tv3	tunnel access permitted, unit replaced	replaced entire power supply
09-Oct-01	yi2-tv18	tripped beam aborted 5e-ps2.A dropped, possible beam induced	beam induced
10-Oct-01	bi4-tv6	power supply tripping, mcr able to use rhic without it	replaced entire power supply
10-Oct-01	bo7-tv7	power supply tripping, mcr able to use rhic without it	replaced entire power supply

Prepared by Gregory P. Heppner

2001 Corrector Power Supply Summary Report

10-Oct-01	yi2-qs3	power supply tripping, mcr able to use rhic without it	replaced entire power supply
10-Oct-01	yo9-tv3	replacement not working properly, mcr request to replace	replaced entire power supply
16-Oct-01	bo7-tv7	tripped indicating an error, benched checked okay	# replaced entire power supply
16-Oct-01	yi7-th11	p.s. off, no evidance of trip on snapshot, possible front panel off switch.	need to investigate further
16-Oct-01	bi4-tv6	p.s. went negative, looking at snapshot, it was told to	operator error
22-Oct-01	bo3-qs	tripped, no faults given, possible off switch on front panel is failing	tunnel access needed
23-Oct-01	bi4-tv6	tripping off	entire power supply replaced
26-Oct-01	bi4-tv6	repaired	entire power supply replaced
28-Oct-01	bi1-th15	tripped off due to a power dip, was able to turn back on	power dip
28-Oct-01	bi4-th7	tripped off due to a power dip, was able to turn back on	power dip
30-Oct-01	bi4-tv6	error, benched checked okay	# replaced entire power supply
30-Oct-01	yo3-tv3	found to be internitting, flickers to standby error, found a 30ohm to ground, replaced ic 702	# replaced entire power supply
31-Oct-01	bi1-th21	tripped to off, MCR tried to bring it back on but was unsuccesful. Checking snapshot plots, Iref spiked positive probably causing it to trip. As for not being able to bring it back on, they tried with a setpoint (can't do that). If happens again, need to further investigate.	tunnel access needed
02-Nov-01	bi1-th8	tripped after rebucketing causing an early end to a store	no problem
02-Nov-01	bi1-th21	tripped causing a large loss in blue	tunnel access needed
04-Nov-01	bo3-th8	standyby error, benched checked okay	# replaced entire power supply
07-Nov-01	yi2-tv18	tripping off, after awhile mcr was able to bring it back on	needs further investigation
08-Nov-01	bi1-th21	Maintenance Day	entire power supply replaced
08-Nov-01	bi8-tv8	Maintenance Day	entire power supply replaced
08-Nov-01	bo3-qs	Maintenance Day	entire power supply replaced
08-Nov-01	yi2-tv18	Maintenance Day	entire power supply replaced
09-Nov-01	yi3-tv2	stuck at flattop value, cfe-3c-ps2 was tne problem	cfe-3c-ps2 rebooted
11-Nov-01	yo9-tv3	pscompare shows no current in power supply	tunnel access needed
13-Nov-01	bi1-th21	no remote setpoint, no led status, replaced ic 702, 703, 401	# replaced entire power supply
15-Nov-01	bi8-tv8	lead flow read back found to be intermitting due to opt 401 (H1LL1) to be faulty	# replaced entire power supply
15-Nov-01	bo3-qs	no remote control, trips with no faults, replaced ic 405 (cyn17)	# replaced entire power supply
21-Nov-01	bo3-th16	MCR claims this supply tripped causing the quench. Upon investigating, power supplies seemed to be operating normally. Snaphot shows that the waveform generator told the supply to drop off.	waveform generator card, possible
21-Nov-01	bo3-tv15	MCR claims this supply tripped causing the quench. Upon investigating, power supplies seemed to be operating normally. Snaphot shows that the waveform generator told the supply to drop off.	waveform generator card, possible
24-Nov-01	yi2-qs3	tripped off taking the beam with it, MCR does'n state wether they reset it or what but on the next day, they say it is off with an range error. A Reset/Stby/On got it back on. Unexplained at the moment, possibly the off button is starting to fail.	off button, possible
07-Dec-01	bo3-th8	tripped off and could not be reset so MCR compensated for it	need tunnel access

Prepared by Gregory P. Heppner

2001 Corrector Power Supply Summary Report

11-Dec-01	bi9-tv18	tripped twice and was reset remotely once by MCR.	need tunnel access
13-Dec-01	bi9-tv18	Miantenance, supply was changed due to previous failures.	entire power supply replaced
13-Dec-01	bo3-th8	Miantenance, supply was changed due to previous failures.	entire power supply replaced
14-Dec-01	bo3-th8	tripped twice during the shift. This was already replaced on 13-Dec-01 but the Ac connections to the main rail were not checked. Possible loose conection??	need tunnel access
20-Dec-01	bo3-th8	Low-res card at times generated large spikes, power supply would try to respond but eventually failed, only responding to half of the Iref command. AC power & magnet connections checked okay.	entire power supply replaced / controls low-res card replaced
23-Dec-01	yi2-qs3	possible power supply problem or controls problem as current and setpoint are claimed to be all over the place as per MCR.	need tunnel access
23-Dec-01	yi3-octd	power supply stayed at zero current.	need tunnel access
24-Dec-01	yi2-qs3	MCR compenstaed for this power supply because it is not operating properly.	need tunnel access for replacement
27-Dec-01	bo3-th8	trips to the off state, found off switch to be faulty.	# replaced entire power supply
28-Dec-01	yo5-qs3	tripped off during a ramp.	need to investigate further
28-Dec-01	yi2-tv2	MCR found it to be in the off position several times during ramps, no complaints since, possible program error or operations error.	unexplained
29-Dec-01	yo5-qs3	tripping causing sudden losses in the beam. MCR will leave off until it is replaced and for noe compensates with yi6-qs3.	needs to be replaced
02-Jan-02	yo5-qs3	trips to the off state, nothing found wrong while bench testing, ran for heat run for two weeks	# replaced entire power supply
03-Jan-02	yo5-qs3	Maintenance Day, replaced due to tripping to the off state.	entire power supply replaced
03-Jan-02	yi2-qs3	Maintenance Day, found power supplyor low res card to be pulling down the setpoint. Replaced both.	entire power supply replaced / controls low-res card replaced
04-Jan-02	yi2-qs3	iref pulled down in the tunnel	# replaced entire power supply
04-Jan-02	yi3-octd	power supply had no output.	# replaced entire power supply
05-Jan-02	yo8-th12	tripped to off during the ramp, was compensated for only on the flattop stone.	need tunnel access
06-Jan-02	yi3-octd	trouble ramping, in fact hasn't ramped since around Dec 23, 2001	need tunnel access
08-Jan-02	bi9-tv8	trips to the off state, faulty comp board	# replaced entire power supply
08-Jan-02	yo8-th12	error during a ramp	# replaced entire power supply
09-Jan-02	yo8-th12	Maintenance Period.	entire power supply replaced
09-Jan-02	yi3-octd	Maintenance Period, replaced power supply and found cable disconnected from its Low Res Card.	entire power supply replaced / controls low-res card cable found off.

Prepared by Gregory P. Heppner

2001 Dynapower Power Supply Summary Report

Date	Power Supply	Faults	Solution
09-Aug-01	y6-q6	displays zero ref instead of 1A.	current reg card replaced
10-Aug-01	b12-dh0	tripped QLI	reser
11-Aug-01	b2-dh0	faulty buffer card	buffer card replaced
11-Aug-01	bi9-dh0	tripped	reset
13-Aug-01	b2-dhx	tripping	reset
14-Aug-01	b2-dhx	blown fuse, found a failed transformer and tantalum capacitor	heater chassis
14-Aug-01	yo9-qd9	tripping when running up, replaced Vreg & Ireg cards (no fix)	replaced entire power supply
15-Aug-01	bi4-qf3	firing card problem, cycled power to clear	firing card
15-Aug-01	y8-q6	tripped	reset
15-Aug-01	yo9-qf6	tripping on error, faulty zfct card	zfct card replaced
16-Aug-01	yi7-qf9	tripped off on ac overcurrent	ac overcurrent
18-Aug-01	yo1-qd3	tripped off (twice)	George instructed MCR on a possible solution.
19-Aug-01	yi10-qd2	tripped	current reg card replaced
20-Aug-01	yi10-qd2	still has current regulation problems	replaced entire power supply
22-Aug-01	bi9-dhx	indicated a crowbar	cycled power to clear
26-Aug-01	bi8-qf9	firing card problem	cycled power to clear
26-Aug-01	yo9-qd1	dropped to zero before link was pulled	reset
28-Aug-01	bo2-qd3-ps	Oscillating causing permit link to be pulled	cycled power to clear
30-Aug-01	yo9-qd1-ps	off, replaced control card and digital Iso card	control card & digital card replaced
01-Sep-01	b12-dhx	12a-ps1, b12-dhx tripped	reset
01-Sep-01	b12-dhx	voltage fluctuation	reset
02-Sep-01	b12-dhx	still acting up, firing board replaced	firing card
02-Sep-01	b12-DHX	12 o'clock heaters fired, b12-dhx shows same voltage signatures on past mortem plots.	voltage regulator card replaced
03-Sep-01	bi9-qf7-ps	blue qli 10a-ps3.A pulled, bi9-qf7-ps	current reg card replaced
04-Sep-01	b12-dhx	blue qli 12b-dhx, 12 o'clock heaters fired	reset
05-Sep-01	b12-dhx	tripping, replaced several control cards, low level power supply & power supply chassis	loose connections on AC power in QPA
07-Sep-01	bo11-qd1	current spikes a few amps on some ramps, firing board replaced	firing card
07-Sep-01	yi7-qf9	AC phase fault while still on, replaced control card and tightened D-connector to node card	control card & loose connection
09-Sep-01	6b-qd2	failed, replaced the aux power supply on the slave quench detection chassis	aux ps replaced
30-Sep-01	yo2-dh0	error signal, control card found to have a faulty standby switch	control card replaced
30-Sep-01	yo9-dho	current ref dropped, faulty relays on current reg card	current reg card replaced
02-Oct-01	y12-dho	spike on 4-20ma signal causing link to fall, buffer card was the problem	buffer card replaced
11-Oct-01	y4-dho	wfg did not match the setpoint, however setpoint & current did	Harness, replaced housekeeping pwr harness to 3U chassis
22-Oct-01	b12-dhx	current regulator problem	isolation amplifier card, buffer card and firing card were all replaced.

Prepared by Gregory P. Heppner

2001 Dynapower Power Supply Summary Report

23-Oct-01	b12-dhx	wfg vs Ireg and current not following, changed current reg card and fiber optics card but placed original fiber optics card back because new one had an off set with the digital and analog reads	current regulator card replaced
23-Oct-01	bo10-dhx	the voltage dropped to zero before the link was pulled	current reg card and interface card were replaced
23-Oct-01	bo10-qd7	setpoint differed	fiber optics card replaced
25-Oct-01	bo11-qd1	iref and current spikes, meaning the current is fluctuating by 10 amps	current regulator card replaced
28-Oct-01	bi12-q6	tripped on error fault after a qli, unable to reset so the ac power had to be cycled to clear the fault	ac power recycled
29-Oct-01	yi2-q7	tripped to standby error,besides changing fiber card, tapped relays on the current reg card then reseated it back into the slot	fiber optics card replaced
30-Oct-01	bi8-qf3	recovery halted after cheching permit link, postmotems shoed that Iref dropped before T=0. Current reg card was checked and found that the K2 relay (P.S. On) was in fact faulty.	current reg card replaced
04-Nov-01	bi9-dhx	supply had zero current until 44ms before quench link was pulled. The current ref then jumped 1400 and 0 amps.	current regulator card replaced
04-Nov-01	bo10-qf6	found in standby-error state, caused ramping to injection to be haulted	current regulator card replaced
05-Nov-01	y2-q7	ref was at zero when trying to ramp up, found stuck relay on the current reg card to be the cause. Once card was tapped, ref shot up causing a quench	current regulator card replaced
05-Nov-01	y4-dho	output fluctuations, ranga error alarm, current drops out for a period of time then comes back. Will need time to investigate as current reg card or backplane could be at fault.	needs further investigation
08-Nov-01	b2-dho	while running recovery script, it stopped on bi2-dho. Prior to that, 2B power supply PLC was reset, this may have been the cause.	system reset
08-Nov-01	y4-dho	range error at same time the loss monitor permit pulled	needs further investigation
13-Nov-01	bo11-qd1	noisy on ramps, jumps around at times, (see various barshows)	zfct card replaced (still noisy at times, needs further investigation)
13-Nov-01	bo6-qf8	noisy on ramps, jumps around at times, (see various barshows)	isolation amplifier card replaced (Still noisy at times, needs further investigation)
13-Nov-01	yo9-dho	setpoint noisy on ramps, jumps around at times, (see various barshows)	current reg card replaced (improved)
14-Nov-01	yi10-dho	power supply current and error signal, comment by Johannes---durning the quadratic part of the ramp there is an error of 0.15amps. The non-smooth error is already in the iref (i.e. its in the DAC part), the power supply is trying to follow the irregularities and breaks into oscillations. (see barshow 11-14 @ 11:16:33)	possible controls problem???
15-Nov-01	bo10-qd1	Tripped off -0.1275sec before T=0, same time as bo10-qf6. They both share the same rack, susspect an AC power glitch/failure in that rack.	ac power in rack glitched
15-Nov-01	bo10-qf6	Tripped off -0.1275sec before T=0, same time as bo10-qd1. They both share the same rack, susspect an AC power glitch/failure in that rack.	ac power in rack glitched
19-Nov-01	b4-dho	blue 11b-ps1 tripped after yellow 1b-ps1, possibly due to a dirty dump or cross talk with b4-dho-ps	no action taken
19-Nov-01	b4-dho	yellow 8b-ps1 tripped because the blue dho had a real quench and possible cross talk tripping yellow	no action taken

Prepared by Gregory P. Heppner

2001 Dynapower Power Supply Summary Report

19-Nov-01	bo10-qd1	tripped off, upon checking, found electricians working on the main panel that supplies power to this power supply. They were banging the cabinet as they were installing a transiate suppressor to the 208vac line. Possible loose connection so we checked and found (phase-A) screw on the main disconnect switch did tighten by 1/4 turn. Also retightened connections inside the power supply cabinet.	possible loose connection
19-Nov-01	bo10-qf6	tripped off, upon checking, found electricians working on the main panel that supplies power to this power supply. They were banging the cabinet as they were installing a transiate suppressor to the 208vac line. Possible loose connection so we checked and found (phase-A) screw on the main disconnect switch did tighten by 1/4 turn. Also retightened connections inside the power supply cabinet.	possible loose connection
20-Nov-01	y12-dh0	MCR claims that this power supply is always showing a error signal oscillation, 0.2 amps p-p at injection.	needs investigation
03-Dec-01	yo12-qd3	(3) QLI's would occur when the recovery script was put into action. Traced back to Buffer card and found that a capacitor (C-61) of the setpoint channel was shorted, causing the +15v1, +15v2 and the+16v power supply to be pulled down. Postmortems show -12 amps of current and Iref (see PS PostMortem yo12-qd3-ps, Mon Dec 3, @ 05:51:38)	buffer card replaced
03-Dec-01	yo9-qd1	Iref dropped before T=zero pulling the link down. Possible loose connection within the 3U-chassis or housekeeping supply or anoth faulty off push button on the control card.	possible loose connection, need further investigation
12-Dec-01	bo11-qd1	noisy on ramps, jumps around at times, "D" connectors were reseasted and problem seemed to clear for awhile. Possible loose connections in the 3U chassis or housekeeping supply.	needs further investigation
13-Dec-01	bo11-qd1	replaced 3U chassis backplane because this is believed to be the cause of the noisy ramps (see 12-Dec 01).	3U chassis backplane replaced
14-Dec-01	bo3-qd7	Causing blue tunes to shift creating large beam losses at the dumps and 2 O'clock. Power supply found to be slightly oscillating, K2 of the current reg card (Iref) cold solder joint and starting to fail.	current regulator card replaced
15-Dec-01	b12-dhx	big error MCR says they were clearly seen on the horizontal orbit blowup.	no action taken
15-Dec-01	b2-dhx	small error, MCR says this can be seen on the horizonal orbit blowup.	no action taken
15-Dec-01	b6-dhx	small error, MCR says this can be seen on the horizonal orbit blowup.	no action taken
20-Dec-01	bo11-qd1	Noise on the ramps, replaced the housekeeping p.s., current reg card - slight intermitting K2 (ref) relay, voltage reg & buffer card. Checked AC connections (2 slightly loose), MADC readback "D" connector and MADC Lemo connections in rack.	current regulato, voltage, buffer card & housekeeping p.s. replaced
20-Dec-01	yi3-qf7	Found Iref oscillating then dropping off before current causing the QLI trip. Possible K2 relay for the ref is intermitting. Reset, unable to retrieve the card at this time as beam ops continues.	needs further investigation, MCR would run as is
24-Dec-01	yi3-qf7	causes large oscillations, found K2 relay to be bad on the current regulator card	current regulator card replaced
27-Dec-01	b8-dh0	current jumped up on turn on causing the b8-dhx voltage to become unstable since the two are connected, causing a crowbar fault	

Prepared by Gregory P. Heppner

2001 Dynapower Power Supply Summary Report

03-Jan-02	b2-dh0	(Maintenance) When on turn on, the supply would jump up then caused the dhx respective power supply to react causing current to jump and voltage to go to the rail, tripping on Crowbar. If this doesn't work, then modification to the firing card will be required.	current regulator card replaced
03-Jan-02	b2-q6	MCR claims that the power supply oscillates on the ramp producing tune oscillations. Fiber optics card replaced and later found the DAC chip wasn't properly seated in its socket.	firber optics card replaced
03-Jan-02	b8-dh0	(Maintenance) When on turn on, the supply would jump up then caused the dhx respective power supply to react causing current to jump and voltage to go to the rail, tripping on Crowbar. If this doesn't work, then modification to the firing card will be required.	current regulator card replaced
09-Jan-02	bo11-qd1	From Georges notes, current signal looks ratty. Re-checked for loose connections on all AC & DC connections (power supply and QPA) in the rack. A crew also checked the DC connections at the valve box. Nothing found unusual.	Loose connections, check (found none)
15-Jan-02	bi12-qf3	QLI, postmortems indicated that the current, iref, voltage and error all dropped off before T=zero. It turned out the +16v was loaded down on the buffer card due to a shorted cap (C118) which also loaded down the +15v2.	buffer card replaced
15-Jan-02	bi9-qf7	QLI, while ramping up, postmortems indicated that the current remained at zero while Iref was ramping up. A 1/2 volt offset was discovered in the voltage setpoint. Upon examination, the time constant board pins were not fully seated and this corrected the problem. Also the K2 relay was slightly questionable so it was replaced.	current regulator card replaced
16-Jan-02	y2-q7	Caused a QLI while ramping to Park. Buffer card indicated all negative readbacks. Later found C112 shorted, loading down the +18v2 input to the card.	buffer card replaced

2001 Gamma-T Power Supply Summary Report

Date	Power Supply	Faults	Solution
31-Jul-01	yo8-qgt	tripped to the off state	reset
01-Aug-01	yo8-qgt	showing a crowbar fault and the ref was not able to come down from 100amps, problem found to be in the wfg program.	wfg program
08-Aug-01	yi2-qgt	found magnets to be wired improperly	magnets
22-Aug-01	bi8-qgt	causing a state mismatch alarm on the ADT althogh there is no mismatch	software
20-Sep-01	bo7-qgt	would not reach operating curent of 30amps, there was a 2amp offset. However, the power supply could be run higher if needed so the problem was a faulty relay on the current reg card. Field tap test verified this.	current reg card replaced
21-Sep-01	bo7-qgt	output not same as previous, found rampTimeS set for 20 instead of 1	operations error
23-Sep-01	bo7-qgt	rampTimeS set to 20 again instead of 1, not sure why?	operations error
23-Sep-01	yi6-qgt	tripped at flattop	
24-Sep-01	bi12-qgt	tripped off, able to reset remotely, setpoint must be at zero when turning on!	control
24-Sep-01	gamma-t	beam loss at transition, cfe-7c-ps1 shows no heartbeat, MADC error, controls to repair	madc error
08-Oct-01	yo9-qgt	found to be off, mcr turned back on	reset
19-Oct-01	bi9-qgt	did not ramp/jump, seems an accramp event started the data taking but since it was not a real ramp, no gamma-t event occurred.	operator error
23-Oct-01	bi9-qgt	rampTimeS set to 20 again instead of 1, not sure why?	operations error
25-Oct-01	yi3-qgt	did not ramp but appeared to jump as per barshow. Wfg not started	operator error
27-Oct-01	yo9-qgt	received a bad wfg request and did not work the right way, logs show this area received a high dose of radiation and perhaps caused a memory corruption in the wfg of o9-qgt	ac reset of the 9c-ps2
31-Oct-01	bi8-qgt	tripped during the down ramp from flattop, MCR was able to reset	reset
05-Nov-01	bo2-qgt	found to be in the off state, MCR was able to turn it back on remotely, possible control card beginning to fail or a loose AC connection?	reset
09-Nov-01	yi3-qgt	stuck at flattop value, cfe-3c-ps2 was tne problem	cfe-3c-ps2 rebooted
12-Nov-01	bo2-qgt	MCR claimed that in wouldn't jump, looking at barshow, the power supply was never turned on.	operations error
25-Nov-01	bo3-qgt	tripped during a fill but did not cause the beam to abort and MCR continued as the lifetime still looked normal. Possible control card off switch and change durning maintenance day. Jim checked the card and could find nothing wrong at the time.	control card changed
26-Nov-01	end of the (au) run	Gamma-t's not used in the polarized proton run, all left off and locked out.	put in off state until next heavy ion run.

Prepared by Gregory P. Heppner

2001 IR Suncraft Power Supply Summary Report

Date	Power Supply	Faults	Solution
12-Aug-01	yo1-tq4	therm alarm	ovc fault, igbt driver cards replaced
12-Aug-01	yo8-tq5	tripped on evercurrent qpa	ovc fault, igbt driver cards replaced
12-Aug-01	yo8-tq5	tripped off	
13-Aug-01	yo12-tq5	tripped	
15-Aug-01	yo4-tq6	tripped off	
22-Aug-01	yo12-tq5	tripped	
24-Aug-01	yi10-q89	overtemp, replaced air filter	replaced entire power supply
24-Aug-01	yo12-tq5	tripped off a few times in the middle of ramps	current reg card replaced
26-Aug-01	b8-q89	no ac power to the 15v supply	replaced entire power supply
07-Sep-01	6b-qd2	cfe-6b-qd2 needed to be rebooted	reset cfe-6b-qd2
07-Sep-01	yi2-qd2	replaced current reg card but no fix	replaced entire power supply
07-Sep-01	yo9-tq6	no setpoint, no current, removed plastic cover and problem cleared.	loose wire
08-Sep-01	6b-qd2	replaced circuit board, trouble reloading software, bucket was not zeroed when reloading.	circuit board replaced
08-Sep-01	6b-qd2	not responding, re-compiled the DSP code for cfe-6b-qd2 and reloaded the software	reset cfe-6b-qd2
12-Sep-01	bo11-tq6	replaced fiber optic interface card	fiber optics card replaced
18-Sep-01	yo9-tq6	No set point & no current, changed current reg card, relays failed	current reg card replaced
19-Sep-01	yi7-tq4	tripped, indicating a quench error, wrong program file for ramp factor was used	operations error
22-Sep-01	bi9-q89	indicating off-error, would not recycle due to power dip? Unit was reploaced	replaced entire power supply
30-Sep-01	y12-q89	possible ac contactor is the problem, replaced entiire power supply	replaced entire power supply
02-Oct-01	bi4-tq6	qdplots showed voltage on B4TQ6 VT dropped before t=zero	reset, unknown
04-Oct-01	bo6-tq6	tripped several times during the blue qli recovery, mcr was able to reset it	reset, unknown
06-Oct-01	bi5-tq6	bad housekeeping supply, -15v reg, lower FET board loading down +15v reg	replaced entire power supply
11-Oct-01	bi8-tq6	Internal contactor not closing properly	replaced entire power supply, (replaced main contactor inside unit).
11-Oct-01	bo6-tq6	Internal contactor not closing properly	replaced entire power supply, (replaced main contactor inside unit).
16-Oct-01	yi10-tq5	MCR had trouble bringing it on after it tripped, however they were able to.	need to investigate further
22-Oct-01	bi5-tq4	tripped on quench error	fiber optics card replaced
22-Oct-01	bi5-tq4	tripped several times, replaced fiber optic card and current regulator card.	current regulator card replaced
23-Oct-01	bi5-tq4	would not clear when running recovery scripts.	loose connector on the QPA
23-Oct-01	bi9-tq4	current would drop off, swapped new supply and Ireg and Vreg cards	entire power supply replaced
23-Oct-01	bo10-qf2	indicates an error, possible internal contactor failing	replaced entire power supply
23-Oct-01	yi10-tq5	ESI fault would not clear but power supply would operate normal. Turned out to be a faulty ring security relay (RY401) on the house keeping power supply.	replaced entire power supply
23-Oct-01	yi3-tq6	qpa fail on overcurrent	IGBT cards replaced (2)
25-Oct-01	yi3-tq6	tripped several times on quench indication	needs further investigation
26-Oct-01	bi9-tq4	repaired	entire power supply replaced
02-Nov-01	yo4-tq6	tripped after rebucketing causing an early end to a store	no problem
05-Nov-01	bi9-tq4	tripped during a store and was restored remotely, later tripped on quench indication	needs further investigation

Prepared by Gregory P. Heppner

2001 IR Suncraft Power Supply Summary Report

25-Dec-01	bo11-tq6	Early morning hours, Main Conrol claims they can not bring the supply to on, cas replaced the current reg card and the fiber optics cardas per Don Bruno	current reg card replaced and fiber optics card
27-Dec-01	bo11-tq6	changed the control card once more, found nothing wrong.	control card replaced

2001 RHIC Main Power Supplies Summary Report

Date	Power Supply	Faults	Solution
08-Aug-01	main yellow dipole	"curr mon" alarm, found capacitors left out of filter circuit board	capacitors added
12-Aug-01	4b-time.A	blue quench while at injection	unexplained trip
15-Aug-01	4b-time.B	(2) found no problems, probable loose connections	loose conections? need time to look into.
17-Aug-01	4b-time.B	blue quench link tripped	unexplained trip
18-Aug-01	4b-time.B	blue quench link tripped	unexplained trip
18-Aug-01	4b-time.B	blue & yellow permit link pulled	unexplained trip
19-Aug-01	4b-time.B	blue qli	loose conections? need time to look into.
21-Aug-01	main supplies	yellow, during ramp, glitch in main power supplies	FEC's rebooted
22-Aug-01	blue main quad	"reg error" on ADT	regulation appeared normal
23-Aug-01	yellow main dipoles	trouble ramping, changed and reloaded some PLC processors due to current fluctuations	plc reloaded
30-Sep-01	yellow main dipole	indicating 8176.987 amp readback, proceedure for turning on not followed properly after mains were unlocked	operations error
15-Oct-01	yellow main dipole	glitch, caused the yellow 7b-ps1 to drop during the recovery program from a prior qli	retry
16-Oct-01	yellow main dipole	qli, in yellow ring 4b-time.B	glitch
17-Oct-01	yellow main dipole	qli in yellow ring, 11b-ps1 tripped during the down ramp.	glitch
17-Oct-01	yellow main dipole	qli in theyellow ring, 7b-ps1tripped during the down ramp	glitch
19-Oct-01	blue main dipole	qli in the blue ring, 12a-ps1.A triiped	glitch
19-Oct-01	yellow main dipole	qli in the yellow ring, 11-ps1 tripped, mains show a disturbance in the current.	glitch
21-Oct-01	blue main quad	qli in the blue ring, 2b-ps1 tripped during the down ramp	glitch
22-Oct-01	blue 4b-time.A	Carl working on the system, power was shut off to the mains regulators to load new software for the problems with the glitches.	software reload
22-Oct-01	blue main dipole	qli in the blue ring, 4b-time.b, main dipole flattop supply indicated an overcurrent on the output fault.	glitch
22-Oct-01	blue main dipole	qli in the blue ring, 4b-time.b, down ramp dipole main switching between the flattop current and the ramp current, a reboot of the cfe-4b-ps1 was tried.	glitch
22-Oct-01	yellow 4b-time.A	Carl working on the system, power was shut off to the mains regulators to load new software for the problems with the glitches.	software reload
22-Oct-01	yellow main dipole	qli in the yellow ring, 11-ps1 tripped during the down ramp	glitch
22-Oct-01	yellow main dipole	qli in the yellow 9b-ps1 tripped during the down ramp.	glitch
23-Oct-01	4b-time.B	Work being done on the main systems t track down the reason for the various glitches.	glitch
24-Oct-01	4b-time.B	qli in the yellow ring, 4b-time.B, more adjustments to the main system being made.	investigating problem
24-Oct-01	4b-time.B	qli in the blue ring, 4b-time.B, work being done on the system to upgrade for the glitch problems.	investigating problem
24-Oct-01	yellow main dipole	qli in the yellow ring, 7b-ps1 tripping	glitch
28-Oct-01	blue main quad	qli in the blue ring, 4b-time.B, main quad power supply voltage dropping, investigating found possble noise coupling in connection with the booster mmps pulsing.	possible interferance with the booster mmps
29-Oct-01	blue main dipole	qli in the blue ring, 4b-time.B, main dipole has a large oscillation between the flattop and the ramp current	need further investigation

Prepared by Gregory P. Heppner

2001 RHIC Main Power Supplies Summary Report

30-Oct-01	blue main dipole	qli in the blue ring, 11b-ps1, wrong ramp factor was used.	operator error, wrong slow factor used
30-Oct-01	blue main quad	qli in the blue ring, 4b-time.B, possible connection with the booster mmps pulsing	possible interferance with the booster mmps
01-Nov-01	blue main dipole	qli in the blue ring, 4b-time.B, oscillating on the down ramp.	glitch
03-Nov-01	4b-time.B	qli in the blue ring, 4b-time.B, a down sequence was inadvertantlyissued sending the mains to park.	operator error
03-Nov-01	blue main dipole	qli in the blue ring, 4b-time.B, between the flattop and the ramp current, MCR said the booster mmps was accidentally left on at the time of switch over.	operator error
05-Nov-01	blue main dipole	qli in the blue ring, 4b-time.B tripped, causing a REAL QUENCH	glicth/software
05-Nov-01	blue main dipole	postmortems show b-dmain oscillating at -0.28sec switching between ramp and flattop currents	glicth/software
05-Nov-01	yellow main dipole	qli in the yellow ring, 4b-time.B, glitch/software, tripped durning the down ramp	glicth/software
05-Nov-01	yellow main dipole	qli in the yellow ring, 5b-ps1 tripped durning the downramp, main p.s. regulator not working	regulator problems
05-Nov-01	yellow main dipole	qli in the yellow ring, 4b-time.B tripped, causing a REAL QUENCH	glicth/software
05-Nov-01	yellow main dipole	qli in the yellow ring, 4b-time.B, power supply glitch	
07-Nov-01	blue main quad	current taking off at injection, turns out someone was testing live Gamma feature in the decoupling scripts. Software testing	operations erreor, software testing
08-Nov-01	yellow main quad	p.s. glitch, still looking into	glicth/software
10-Nov-01	blue main	power supply did not come on when blue was trying to come up.	opperations error
10-Nov-01	blue main dipole	qli in the blue ring, 3b-ps1 causing a real magnet quench, this one is either caused by the blue main dipole or in connection with the feedback beam control area fault.	unexplained trip
11-Nov-01	yellow main quad	QLI durning the downramp from top energy, YQMC=3455	glicth/software
11-Nov-01	yellow main quad	QLI durning the downramp from top energy, YQMC=3342	glicth/software
14-Nov-01	yellow main dipole	main dipole buss, read ground current changes not steady, still searching, possible ice ball build up as the current slowly drops.	unexplained trip
17-Nov-01	yellow main dipole	qli in the yellow ring, 9b-ps1, comment in the log - main dropped off at top energy, then YDMC decay was disturbed like before when the dump resistor cable was moved in the OCC.	glicth/software
19-Nov-01	yellow main dipole	qli in the yellow ring, 4b-time.A, caused a real quench	glicth/software
19-Nov-01	yellow main dipole	work being done to solve power supply glitch, DCCT chassis was changed	DCCT chassis changed
21-Nov-01	blue & yellow	quench occurred at same time for both rings, possibly there is a bad permit module in the field, will continue to monitor and investigate durning next maintenance day.	permit module
21-Nov-01	blue main dipole	indicated a voltage drop, while the blue main quadcurrent dropped moments later. With no other indications, it is believed that a k-lock connector may be the cause	loose k-lock?
21-Nov-01	blue main dipole	the waveform does some strange things while it is not told to do so, the ramp power supply went to a large negative voltage.	unexplained trip
21-Nov-01	yellow main dipole	while sitting at top energy, the current suddenly dropped off. Possibly a DCCT chassis fault, will look into it further when the next maintenance day is scheduled	unexplained trip
02-Dec-01	yellow main dipole	Carl diagnosed the problem to be within the DCCT losing lock. He replaced pieces one at at time for now and will continue to monitor.	DCCT losing lock

Prepared by Gregory P. Heppner

2001 RHIC Main Power Supplies Summary Report

10-Dec-01	blue main quad	tripped due to a controls problem in the wfg telling the supply to stop changing early in the ramp then jumping upwards at the time of the QLI.	controls, wfg
22-Jan-02	Blue Main Dipole	qli in the blue, 1b-ps1, Glitch occurred on the main as the down ramp was initiated, as seen before when switching from Flat top current to Ramp current.	Carl said he needs to re-adjust the system

2001 Power Dips / Weather Related Trips Summary Report

Date	Type	Faults	Cause
10-Aug-01	Power Dip	1900 hrs.	unexplained
12-Aug-01	Power Dip	1900 hrs.	unexplained
13-Aug-01	system awarness	weather alert 1348 to 1502 hrs.	weather related
20-Aug-01	system awarness	Alerted of bad weather in the area, possible power dips due to incoming storm fronts.	weather delay
27-Aug-01	system awarness	Alerted of bad weather in the area, possible power dips due to incoming storm fronts.	weather delay
10-Sep-01	Weather realated	power dip	weather related
20-Sep-01	Power Dip	qli 2b-ps1 & 12a-ps1, recovering	unexplained
21-Sep-01	power dip	slight power dip	weather related
22-Sep-01	power Dip	Multiple dips (5), LIPA reported a power line had tripped and locked out	Power failure
30-Sep-01	power glitch	Carl found multiple ripples on p.s. throughout the ring on the post mortem plots	power glitch
08-Oct-01	power dip	8b-ps1 blue ring and 2b-ps1 yellow first to drop	weather related
28-Oct-01	power dip	minor power dip causing Linac Mod 5, Phenixmain magnet power supply, several atr supplies to trip and a few corrector power supplies in the blue ring.	unexplained
10-Nov-01	Power Dip	MCR contacted LIPA and they said that a 69kV line tripped. Many systems were affected.	LIPA 69kV line trip
12-Jan-02	Power Dip	MCR reported that a power dip had occurred. Only the Blue Ring went down and not the Yellow. Bo2-qd3-ps showed that Iref f=dropped before T=0 but the current and currents of many others dropped first indicating that there was a power fluctuation.	?, only Blue Ring was affected.

Prepared by Gregory P. Heppner

2001 QPA Related Failure Summary Report

Date	QPA	Faults	Solution
11-Aug-01	bi1-tq6-qp	tripped on overcurrent	ovc fault, igbt driver cards replaced
11-Aug-01	bo7-qf2-qp	tripped on overcurrent	ovc fault, igbt driver cards replaced
30-Aug-01	yo9-qd7-qp	fan switch sticking	cycled power to clear
06-Sep-01	QPA	yellow, 1006B, suspect QPA problem with house as even tq supplies tripped out	qpa
07-Sep-01	bo10-qd7	ovc fault	ovc fault, igbt driver cards replaced
07-Sep-01	quench detector	ADC card changed because of high currents on the QDPLOT program, tripping link, stuck channels	"junk in, junk out" the program
07-Sep-01	yi10-dho	fan fault, cycled fan switch several times	cycled switch contacts
07-Sep-01	yi10-qf3	fan fault	fan, air vane to close to wire, sticking
07-Sep-01	yo9-qd7-qp	found fan rubbing against the filter grill	fan rubbing
07-Sep-01	b-qtrim	fan fault, measured 9ohms - cycled fan switch several times now reads 0.3ohms	cycled switch contacts
19-Sep-01	bo7-qf8	replaced controller card, found burnt transformer	qpa control card replaced
22-Sep-01	QPAIC	Chassis was replaced due to driver chips not working properly, cause was possible due to power dip	qpaic chassis replaced
26-Oct-01	yi3-tq6	IGBT card	IGBT card replaced
04-Nov-01	bi9-qf9	fan fault, air vane was contacting the heat sink preventing it to full travel.	fan fault
04-Nov-01	bi9-qf9	qpa fan fault, qpaControl test box used to exercise the fan switches several dozen times as their switch contacts have been known to get dirty creating resistance build up.	fan fault
04-Nov-01	yi10-qf9	qpa fan fault, qpaControl test box used to exercise the fan switches several dozen times as their switch contacts have been known to get dirty creating resistance build up.	fan fault
05-Dec-01	b12-dhx	Tripped during recovery script, postmortem plots indicate that the power supply voltage spiked to full. Appears a real crowbar fault causing the recovery script to halt.	crowbar, able to reset
14-Dec-01	y8-dho	fan fault around 05:20 causing a QLI but was able to reset. Later during the day shift, the filter was changed.	fan fault, filter changed
15-Dec-01	b8-dhx	fan fault, technicians cycled the switches as they have been known to build up resistance and cause a fault	fan fault
15-Dec-01	bo8-dh0	crowbar fault, power supply voltage appears to rail and the current has moved away from the iref	crowbar fault
20-Dec-01	Air filters	Relaced all air filters in the support buildings on stand alone QPA's during maintenance period. There have been a few fan faults since they were last replaced.	Air filters replaced
27-Dec-01	b8-dhx	tripped due to b8-dho-ps current taking off on turn on. B8-dhx-ps voltage shot up to max, causing a crowbar fault.	crowbar fault
30-Dec-01	b2-dhx	tripped due to b2-dho-ps current taking off on turn on. B2-dhx-ps voltage shot up to max, causing a crowbar fault.	crowbar fault
31-Dec-01	b2-dhx	tripped due to b2-dho-ps current taking off on turn on. B2-dhx-ps voltage shot up to max, causing a crowbar fault.	crowbar fault
06-Jan-02	yi2-qf9	Fan fault occurred while yellow ring was sitting at injection. Possible switch contacts are dirty, building up resistance. Cleared.	fan fault

Prepared by Gregory P. Heppner

2001 QPA Related Failure Summary Report

07-Jan-02	b4-dhx	tripped due to b4-dho-ps current taking off on turn on causing b4-dhx-ps voltage to shoot up to max causing a crowbar fault	crowbar fault
09-Jan-02	b12-dhx	tripped due to b12-dho-ps on turn causing b4-dhx-ps voltage to shoot up to max causing a crowbar fault. Will need modified current regulator card like Jan 07, b4-dhx.	crowbar fault
09-Jan-02	b4-dh0	Maintenance, Don checked V-setpoint and found +/-15v oscillating at 278Hz. He modified the park current circuit, C30 to 15uf and this corrected the problem	crowbar fault / park circuit mod.
09-Jan-02	yi2-qf9	maintenance, examined all air vane switches and cycled them. Contacts read 0.4 to 0.5 ohms so they were not changed.	fan fault

2001 Bldg 1010A Quench Switches Summary Report

Date	Quench Switch	Faults	Solution
15-Aug-01	Y9DQPSW	quench switch, found burnt charging resistor on PFN circuit	resistor replaced
16-Aug-01	PFN Fault	blue quench protection switch PFN charging resistor failure	resistor replaced
26-Aug-01	blue qli	10a-ps3.B, b10 quench protection switch; safety fault, PFN voltage high, thermal fault, overcurrent fault and UPS errors on Pet page.	quench switch
01-Sep-01	B10DQPSW	B10DQPSW quench protection switch supply, electrical safety fault, PFN voltage high, thermal fault, overcurrent fault and UPS.	quench switch
03-Sep-01	B10DQPSW	B10DQPSW quench protection switch supply, dispolayed PFN voltage low	capacitor shorted on the PFN bank
30-Oct-01	B9DQPSW	failed scr driver board for IM3-SCR	scr driver card replaced
05-Nov-01	B9DQPSW	#2 scr driver card found to be reading zero volts, checked for bad card, fuse and loose connections, even tested both scr's with wing using a mobile power supply. Every thing checked okay, replaced driver card encase it was intermitting.	scr driver card replaced
23-Jan-02	Y10DQPSW	Support indicated that no lights were lit on the front of the power supply, turned out that the PLC was the fault. Reloading of the software didn't work, unit was replaced.	PLC unit replaced

Prepared by Gregory P. Heppner

2001 Sextupole Power Supply Summary Report

Date	Power Supply	Faults	Solution
16-Aug-01	yi3-sxd	tripped off	
29-Aug-01	yi3-sxd	tripped	
03-Sep-01	5 o'clock sextupoles	will not stay on	ground fault in air conditioners?
04-Sep-01	bi5-sxd-ps	tripped several times, suspect ground fault problems	ground fault in air conditioners?
04-Sep-01	yo5-sxd-ps	tripped several times, suspect ground fault problems	ground fault in air conditioners?
08-Sep-01	bi5-sxd-ps	tripped while ramping back to injection	
08-Sep-01	yo5-sxd-ps	tripped at top energy	
09-Sep-01	yi5-sxd	tripping off	
10-Sep-01	yi3-sxd	tripped to standby error	
12-Sep-01	bi5-sxd-ps	(tripping several times - problem not found)	
14-Sep-01	bi5-sxd-ps	tripping off, replaced current reg card on p.s. & digital card on quench detector, modified p.s. firing card	firing card
15-Sep-01	5b Sextupoles	removed ground to isolate the firing cards in all 4 p.s.	firing card, ground isolated
22-Sep-01	yi3-sxd	not able tocome on, recylced ac power to qda - caused by power dip	cycled power to clear
23-Sep-01	bi1-sxd	tripped when reaching 12.452 amps, possible grounding problem like that in 1005?	firing card
23-Sep-01	bi1-sxd	tripped at 12.324 amps while ramping	firing card
23-Sep-01	bi1-sxd	tripped near the top of the ramp	
23-Sep-01	yi11-sxd	tripped during sextupole beam cleaning	beam induced
26-Sep-01	bo3-sxd	tripped but able to reset	firing card
27-Sep-01	bo7-sxd	wobbly on the up ramp, we didn't get called on this	software
27-Sep-01	bo7-sxf	wobbly on the up ramp, we didn't get called on this	software
28-Sep-01	all sextupoles	being that the removal of the ground wire from the firing card seems to be working on all four power supplies in the 5b alcove (see 15-Sep-01), it was decided to do that procedure to all sextupole power supplies in the remaining alcoves 1b, 3b, 7b, 9b, and 11b.	firing card, ground isolated
30-Sep-01	7B sextupoles	yi7-sxd & yi7-sxf indicated a quench state and would not reset, quench det. Software reset	software reset for quench detector
02-Oct-01	yi7-sxd	tripping on ramp, turned out mcr was using the wrong ramp factor	operations error
03-Nov-01	sextupoles	bi1-sxd, yo1-sxd, yi3-sxd, bo3-sxd, bo11-sxd, bi9-sxd, yo9-sxd tripping. Turns out Wing reported he will have to reload the inductance tables for the sextupoles.	reload inductance tables
18-Nov-01	yi3-octd	would not follow ramp, output stuck at zero. Upon investigating, power supply was functioning normal. Possible it was off or that the off button is starting to fail.	tunnel access required
30-Dec-01	3 o'clock sextupoles	cryo lead flow alarm, when they investigated it cleared by itself. Heat problem on a component or loose connection?	cryo, but cleared by itself.

Prepared by Gregory P. Heppner

2001 Snake Power Supply Summary Report

Date	Power Supply	Faults	Solution
04-Dec-01	bo3-snk7-2.3 and bo3-snk7-1.4	Appears that the current dropped first that caused it to trip, then loss of cryostat temperature caused snk7-1.4 to also trip creating a real quench.	Cryo reset
05-Dec-01	bi9-snk7	Quenched, MCR says the trip appears to have started in the inner helices/ps. There was no beam at the time.	Able to reset.
05-Dec-01	bi9-snk7-2.3 and bi9-snk7-1.4	current drops first causing a real quench, then causes the snk7-1.4 to quench due to loss of cryo cooling, rise in temperature in the cryostat.	Cryo reset - beam induced, possible
06-Dec-01	bi9-snk7	MCR tuned up blue injection and had a decent injection then put 6 bunches in when the 1.4 outer power supplies quenched on both bi9-snk7 and bo3-snk7.	Able to reset.
06-Dec-01	bi9-snk7-2.3 and bi9-snk7-1.4	Real quench occurred in storage unit #3, then causes the snk7-1.4 to quench due to loss of cryo cooling, rise in temperature in the cryostat.	Cryo reset - beam induced, possible
06-Dec-01	bi9-snk7-2.3 and bi9-snk7-1.4	Real quench occurred in storage unit #3, then causes the snk7-1.4 to quench due to loss of cryo cooling, rise in temperature in the cryostat.	Cryo reset - beam induced, possible
06-Dec-01	bo3-snk7	MCR tuned up blue injection and had a decent injection then put 6 bunches in when the 1.4 outer power supplies quenched on both bi9-snk7 and bo3-snk7.	Able to reset.
06-Dec-01	bo3-snk7-2.3 and bo3-snk7-1.4	Real quench occurred in storage unit #3, then causes the snk7-1.4 to quench due to loss of cryo cooling, rise in temperature in the cryostat.	Cryo reset - beam induced, possible
06-Dec-01	bo3-snk7-2.3 and bo3-snk7-1.4	Real quench occurred in storage unit #3, then causes the snk7-1.4 to quench due to loss of cryo cooling, rise in temperature in the cryostat.	Cryo reset - beam induced, possible
07-Dec-01	bi9-snk7	Tripped, the inner snakes quenched during Injection.	Able to reset.
07-Dec-01	bi9-snk7-2.3 and bi9-snk7-1.4	Real quench, data from the qd plots was wrong, voltage signals were not correct size. The snk7-1.4 quenched due to loss of cryostat temperature.	Cryo reset - beam induced, possible
07-Dec-01	bi9-snk7-2.3 and bi9-snk7-1.4	Real quench occurred in storage unit #3, then causes the snk7-1.4 to quench due to loss of cryo cooling, rise in temperature in the cryostat.	Cryo reset - beam induced, possible
07-Dec-01	bo3-snk7	Tripped, the inner snakes quenched during Injection.	Able to reset.
07-Dec-01	bo3-snk7-2.3	Power supply tripped, possible failure in the control card. There is a window of opportunity from main control so the card wll be replaced. Later found nothing wrong with the card back at the shop.	control card replaced, not the problem
07-Dec-01	bo3-snk7-2.3 and bo3-snk7-1.4	Real quench occurred in storage unit #3, then causes the snk7-1.4 to quench due to loss of cryo cooling, rise in temperature in the cryostat.	Cryo reset - beam induced, possible
11-Dec-01	yi3-snk7-1.4 and yi3-snk7-2.3	Looks like snk7-1.4 shut off causing snk7-2.3 to quench	need tunnel access
11-Dec-01	yi3-snk7-1.4 and yi3-snk7-2.3	QLI occurred because Snapshot triggered when MCR ramped to zero.	operation error
11-Dec-01	yi3-snk7-1.4 and yi3-snk7-2.3	Real Quench in both magnets because time was not permitted to recover from the previous quench, cryo instability.	cryo instability
13-Dec-01	snake p.s. racks alcove 9c	Checked all AC connections for the Snake power supplies in both racks. Found all connections to be tight.	no problems found, maintenance period

Prepared by Gregory P. Heppner

2001 Snake Power Supply Summary Report

13-Dec-01	snakes p.s. racks alcove 3c	Found all connections to the terminal blocks located on the AC blue snakes compartment chassis loose. Appears during installation they were never secured even though this did not show up during testing.	loose AC connections, maintenance period
13-Dec-01	yi3-snk7-1.4	Intermitting control card, the off push button was sensitive to the touch, therefore the probable cause for the supply tripping to off.	Control card replaced, maintenance period
13-Dec-01	yi3-snk7-2.3 and yi3-snk7-1.4	Real Magnet Quench occurred in yi3-snk7-2.3 first then in snk7-1.4. Unknown at the time, no BLM data available but believed to be beam induced.	Cryo reset - beam induced, possible
17-Dec-01	bi9-snk7-2.3 and bi9-snk7-1.4	Real Magnet Quench occurred in bi9-snk7-2.3 first then in snk7-1.4. Beam induced although there was no BLM data.	Beam Induced
17-Dec-01	bo3-snk7-2.3 and bo3-snk7-1.4	Real Magnet Quench occurred in bo3-snk7-2.3 first then in snk7-1.4. Beam induced although there was no BLM data.	Beam Induced
20-Dec-01	bo3-snk7-2.3 and bo3-snk7-1.4	Real Magnet Quench due to power being turned off to the Low Res Controls rack.	Loss of power to Low Res
22-Dec-01	bi9-snk7-2.3 and bi9-snk7-1.4	Real Magnet Quench occurred in bi9-snk7-2.3 first then in snk7-1.4. Beam induced although there was no BLM data.	Beam Induced, possible
23-Dec-01	bi9-snk7-2.3 and bi9-snk7-1.5	Real Magnet Quench occurred in bi9-snk7-2.3 first then in snk7-1.4. Beam induced although there was no BLM data.	Beam Induced, possible
25-Dec-01	bo3-snk7-2.3 and bo3-snk7-1.4	bo3-snk7-2.3 went to the off state causing a quench which in return causes bo3-snk7-1.4 to quench.	No action, MCR reset.
26-Dec-01	bo3-snk7-2.3 and bo3-snk7-1.4	bo3-snk7-2.3 went to the off state causing a quench which in return causes bo3-snk7-1.4 to quench. On Dec. 27, maintenance, we replaced the 3U chassis, control and digital iso card, new node card cable, AC power chassis and Electrician checked main power connections	many replacements
27-Dec-01	yi3-snk7-1.4	Tripped at running current due to an AC phase fault. Electrician found mounting screw for phase c buss bar side of breaker (#12) stripped. Corrected problem by moving it to spare position #8.	loose connection, 60amp breaker in main panel.
27-Dec-01	yi3-snk7-2.3	Possible quench due to yi9-snk7-1.4 ac phase fault. This occurred approx 38 minutes later due to a heat wave that traveled the ring.	heat wave due to yi3-snk7-1.4
31-Dec-01	yi3-snk7-2.3 and yi3-snk7-1.4	quenched due to beam hitting the magnets.	Beam Induced
01-Jan-02	bi9-snk7-2.3 and bi9-snk7-1.5	quenched due to beam hitting the magnets.	Beam Induced
01-Jan-02	bi9-snk7-2.3 and bi9-snk7-1.5	quenched due to beam hitting the magnets.	Beam Induced
11-Jan-02	yi3-snk7-1.4	3c-ps1 permit was pulled, no snapshot data available cause MCR reset it to quickly, Qdplots show that the power supply tripped to the OFF state. Yi3-snk7-2.3 did not quench with it and Cryo reports no heat wave.	Unexplained, (see 27-Dec-01 entry for similar conditions)
16-Jan-02	yi3-snk7-2.3 and yi3-snk7-1.4	The correctos had tripped off on a lead flow fault in the 11 o'clock alcoves and were not turned on prior to injecting beam.	Beam Induced
20-Jan-02	yi3-snk7-1.4 and yi3-snk7-2.3	No snap shot data, ReadAlarmLog showed that the yi3snk7-1.4 tripped to the off state causing a heat wave that wasn't detected until an hour later causing the yi3snk7-2.3 to quench.	Unexplained trip
25-Jan-02	bo3-snk7-2.3 and bo3-snk7-1.4	Power supplies were at experiment (high current levels) and given the OFF command before being run down to zero current, causing a Real Quench to the magnets.	operation error

Prepared by Gregory P. Heppner

2001 Snake Power Supply Summary Report

25-Jan-02	yi3-snk7-2.3 and yi3-snk7-1.4	Power supplies were at experiment (high current levels) and given the OFF command before being run down to zero current, causing a Real Quench to the magnets.	operation error

2001 Other Types of Faults Summary Report

Date	Other-Type	Faults	Solution
12-Aug-01	node card	error, service bldg 1010a, internal 5volt p.s. failure	node card replaced
20-Aug-01	quench recovery prog.	hanging up at dx-heater step	reset cfe-2b-ps1
21-Aug-01	QD1 FEC's	heartbeat failure	George reset network
07-Sep-01	k-lock connector	one found in blue and one found in yellow in 6B	loose connections
11-Sep-01	shut down	operation shut down due to security reasons	security
29-Sep-01	node card	bi4-qf9; node card not responding and was replaced, 5volt p.s.fails when ran too long	node card replaced
20-Nov-01	QLI yellow 10a-ps3.A	tripped the link with no indication, possible loose K-lock	unexplained trip, K-lock?
21-Nov-01	QLI blue 2b-ps1	Real quench caused by accidently hooking up monitoring equipment and pulling the buffer card so it broke contact with the backplane.	buffer card, okay
21-Nov-01	QLI blue 4b-time.B	tripped the link, with no unusual indications, could be another possible K-lock connector.	unexplained trip, K-lock?
21-Nov-01	QLI blue 7b-ps1	tripped the link, possible permit module is starting to go bad	unexplained trip, permit module?
21-Nov-01	QLI yellow 7b-ps1	tripped the link, possible permit module is starting to go bad	unexplained trip, permit module?
03-Dec-01	QLI, blue 12a-ps1.A	All dx heaters fired throughtout the ring, there was no FEC/DSP for the Qd Alarms.	re-boot of the cfe-4b-rtdl
05-Dec-01	7b-ps1	yellow QLI tripped, also in 7b-ps1 blue at the same time.	permit module, possible failing
05-Dec-01	7b-ps1	blue QLI tripped, also in 7b-ps1 yellow at the same time.	permit module, possible failing
13-Dec-01	cooling fans	Cooling fans that help prevent ice ball build up were found off (burnt out) and replaced at the 10 dx magnet and at the 4 O'clock tripplet magnets	fans (3) replaced
20-Dec-01	QLI yellow 6b-ps1	Occurred while ramping from Park to Injection Current. Postmortems and other resources show no conclusive evidence for the quench. Will continue to investigate.	unexplained trip, K-lock?
01-Jan-02	QLI blue 2b-ps1	While running the recovery progam, MCR used the diagnostic Mode which in turn caused the supplies to go from On to Standby to the Off condition. Under normal operations, the recovery progam does not shut the supplies off.	Operator error, using the diagnostic mode during the recovery program.
11-Jan-02	QLI 10a-ps3.A	Yellow QLI occurred while ramping from Park to Injection current. No cause was found, MCR reset and successfully tried again.	unexplained trip.
14-Jan-02	QLI Blue & Yellow (9b-ps1)	A wrong ramp command was given "injection for down2 ramp which is flattop currents" On the Qdplots, the ramp seemed to be going to Injection current but never stopped.	Wrong ramp command
15-Jan-02	QLI Blue & Yellow (7b-ps1)	This problem occurred before and the permit module had been replaced. Upon further investigation, it may be that the U102 interface card may be the problem.	permit module, possible failing
17-Jan-02	QLI Yellow (10a-ps3.A)	YDMC and YQMC sitting at store currents.	unexplained trip.
18-Jan-02	QLI Blue & Yellow (3b-ps1)	Occurred during an unsuccessful deceleration ramp.	beam induced
18-Jan-02	QLI, blue 12a-ps1.A	Occurred during the recovery script from being down for one (1) hour of maintenance.	unexplained trip.

Prepared by Gregory P. Heppner